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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/548,141	04/13/2000	Douglas Lee Schales	YOR9-2000-0185-US1	7716

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EXAMINER

JACOBS, LASHONDA T

ART UNIT	PAPER NUMBER
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2157

DATE MAILED: 01/15/2004

10

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

09/548,141

Applicant(s)

SCHALES ET AL.

Examiner

LaShonda T. Jacobs

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This action is responsive to Applicant Request for Reconsideration filed October 9, 2003. Claims 1-39 are presented for further examination.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Riddle et al (hereinafter, "Riddle", 2002/0143939).

As per claims 1, 34 and 38, Riddle discloses a method and apparatus for classifying a data packet, the method and means comprising:

- receiving the data packet at a root node of a classification tree (paragraphs 0026, 0081-0082, and 0098-0100);
- successively passing the data packet to each child of a first tree level until a first child of the first tree level of the classification tree indicates a satisfaction of a node-criteria of said first child, and the first child forming said data packet into a matched packet (paragraphs 0081-0082, 0098-0100 and 0106); and

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- repeating the step of passing and forming for a next tree level until no first child of said next level at a succeeding next level indicates satisfaction of the node-criteria of said first child of said next level (paragraphs 0081-0082, 0098-0100 and 0106).

As per claim 2, Riddle discloses:

- wherein the step of passing includes executing a set of code which returns a status indication (paragraphs 0059, 0081-0082, 0098-0100 and 0106).

As per claim 3, Riddle discloses:

- wherein the step of forming includes the first child specifying a set of code to be run subsequently (paragraphs 0081-0082, 0098-0100 and 0106).

As per claim 4, Riddle discloses:

- wherein the step of specifying includes specifying the set of code to be run following satisfaction (paragraphs 0081-0082, 0098-0100 and 0106).

As per claim 5, Riddle further discloses:

- dynamically adding at least one node in at least one level of the classification tree (paragraph 0143).

As per claim 6, Riddle discloses:

- wherein said at least one new child node is a Real Audio node (paragraph 0080 and 0143).

As per claim 7, Riddle discloses a method for classifying a packet comprising:

- suspending a packet classification process in progress for said packet; and obtaining external information employed in said classifying (paragraphs 0081-0082, 0098-0100 and 0106).

As per claim 8, Riddle discloses:

- wherein the step of obtaining includes augmenting a node-criteria of a node in a classification tree with external information (paragraphs 0081-0082, 0098-0100, 0106 and 0110).

As per claim 9, Riddle discloses:

- wherein the external information includes identification of the originator of said packet (paragraph 0110).

As per claim 10, Riddle discloses:

- wherein the external information includes authentication of an originator of said packet (paragraph 0110).

As per claim 11, Riddle discloses:

- wherein the classification process is an extendible classifier process (paragraphs 0116-0117 and 0143).

As per claim 12, Riddle further discloses

- the step of parsing said matched packet and generating relevant information (paragraphs 0080-0082, 0098-0100, 0106 and 0110).

As per claim 13, Riddle further discloses:

- the step of transforming said matched packet into a transformed packet (paragraphs 0080-0082, 0098-0100, 0106 and 0110).

As per claim 14, Riddle further discloses:

- associating the packet with a last first child indicating satisfaction (paragraphs 0081-0082, 0098-0100, 0106 and 0110).

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As per claim **15**, Riddle further discloses:

- executing a set of code in accordance with said last first-child (paragraphs 0081-0082, 0098-0100 and 0106)

As per claim **16**, Riddle further discloses:

- determining a disposition of the data packet (paragraphs 0080-0082, 0098-0100, 0106 and 0143).

As per claim **17**, Riddle discloses a method for determining disposition of a packet received at a child node, said method comprising:

- passing said packet and a first disposition of said packet to an external process (paragraphs 0081-0082, 0098-0100, 0106 and 0110); and
- said external process augmenting the packet disposition by employing a process specific means; and returning the augmented packet and an augmented disposition to the child node (paragraphs 0081-0082, 0098-0100, 0106, 0110 and 0143).

As per claim **18**, Riddle further discloses:

- suspending a disposition process in progress for said packet (paragraph 0106).

As per claim **19**, Edwards discloses:

- wherein the augmented disposition includes identification of an originator of said packet (paragraph 0110).

As per claim **20**, Riddle discloses:

- wherein the augmented disposition includes authentication of an originator of said packet (paragraph 0110).

As per claim **21**, Riddle discloses:

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- wherein the disposition is employed for policy enforcement (paragraphs 0050-0052, 0080-0082 and 0098-0100).

As per claim **22**, Riddle further discloses:

- employing the classification process as a firewall (paragraph 0067).

As per claim **23**, Riddle further discloses:

- employing the classification process for application level classification (paragraph 0102 and 0116).

As per claim **24**, Riddle discloses:

- wherein the disposition is employed for policy enforcement (paragraphs 0050-0052, 0080-0082 and 098-0100).

As per claim **25**, Riddle further discloses:

- employing the classification process for rate limiting (paragraph 0053).

As per claim **26**, Riddle further discloses:

- employing the classification process for load balancing (paragraph 0114).

As per claim **27**, Riddle further discloses:

- employing the classification process to shape traffic (paragraphs 0079-0080 and 0116).

As per claim **28**, Riddle discloses an apparatus to classify a data packet, the apparatus comprising:

- a network interface device to receive the data packet from the physical network and pass the data packet to the root node of a classification tree, and the reverse, to receive the data packet from the root node and send the data packet to the physical network (paragraphs 0081-0082, 0098-0100 and 0106); and

- a packet module to successively pass the packet from child node to child node at a next tree level until a first child node of the next tree level of the classification tree which indicates a satisfaction of a node-criteria of the first child node, and to form the data packet into a matched packet until no first child node of at a succeeding next level indicates satisfaction of the first node-criteria of the first child node of the succeeding next level (paragraphs 0081-0082, 0098-0100 and 0106).

As per claim **29**, Riddle discloses:

- wherein a portion of the apparatus is implemented as an accelerator chip (paragraphs 0059-0060 and 0067).

As per claim **30**, Riddle discloses:

- wherein the apparatus is employed for application level classification (paragraph 0102 and 0116).

As per claim **31**, Riddle further discloses:

- wherein the apparatus is employed as a firewall (paragraph 0067).

As per claim **32**, Riddle discloses:

- wherein the apparatus is employed as a border server (paragraph 0059-0060)

As per claim **33**, Riddle discloses:

- wherein the status indication is of the pmt type (paragraphs 0081-0082, 0098-0100 and 0106).

As per claim **35**, Riddle discloses an article of manufacture as recited in claim 34, the computer readable program code means in said article of manufacture further comprising:



- computer readable program code means for causing a computer to effect dynamically adding at least one node in at least one level of the classification tree (paragraphs 0059, 0081-0082, 0098-0100, 0106 and 0143).

As per claim 36, Riddle discloses an article of manufacture comprising

- a computer-usable medium having computer readable program code means embodied therein for causing classification of a data packet, the computer-readable program code means in said article of manufacture comprising computer readable program code means for causing a computer to effect the steps of claim 8 (paragraphs 0059, 0081-0082, 0098-0100, 0106 and 0143).

As per claim 37, Riddle discloses a computer program product comprising

- a computer usable medium having computer readable program code means embodied therein for causing a determination of a disposition of a packet, the computer readable program code means in said computer program product comprising computer readable program code means for causing a computer to effect the steps of claim 18 ((paragraphs 0081-0082, 0098-0100, 0106 and 0110).

As per claim 39, Riddle discloses an apparatus for determining disposition of a packet received at a child node, said apparatus comprising:

- an interrupt context of a control program, said child node existing within the interrupt context (paragraphs 0081-0082, 0098-0100 and 0106);
- an external process outside of the interrupt context of the control program (paragraphs 0081-0082, 0098-0100, 0106 and 0110);

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- means for passing said packet and a first disposition of said packet to the external process, said external process to augment the packet disposition by employing a process specific means and to return an augmented packet with an augmented disposition to the child node (paragraphs 0081-0082, 0098-0100, 0106 and 0110); and
- said interrupt context including means for receiving said augmented packet and said augmented disposition from said external process (paragraphs 0081-0082, 0098-0100, 0106 and 0110).

***Response to Arguments***

3. Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

**The Office Notes the following arguments:**

- a. Edwards does not teach or suggest classifying a data packet by passing it to each child of a tree level until satisfaction of a node criteria of the first child, as claimed in 1. Claim 1 is believed not anticipated by Edwards and thus allowable over the cited art.
- b. Edwards does not teach or suggest suspending a packet classification process in progress, as in claimed 7. Claim 7 is believed not anticipated by Edwards and thus allowable over the cited art.
- c. Edwards does not teach or suggest passing said packet and a first disposition of said packet to an external process; and said external process augmenting the packet disposition by employing a process specific means; and returning the augmented packet and an augmented disposition to the

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child node. Claim 17 is believed not anticipated by Edwards and thus allowable over the cited art.

d. Edward does not teach or suggest a packet module to successively pass the packet from a child node to child node at a next tree level until a first child node of the next tree level of the classification tree which indicates a satisfaction of a node-criteria of the first child node, and to form the data packet into a matched packet until no first child node of at a succeeding next level indicates satisfaction of the first node-criteria of the first child node of the succeeding next level.

Claim 28 is believed not anticipated by Edwards and thus allowable over the cited art.

e. Edwards does not teach or suggest means for successively passing the data packet each child of a first tree level until a first child node of the first tree level of the classification tree indicates a satisfaction of node-criteria of said first child node, and the first child node forming said data packet into a matched packet. Claim 38 is believed not anticipated by Edwards and thus allowable over the cited art.

f. Edwards does not teach or suggest means for passing said packet and a first disposition of said packet to the external process, said external process to augment the packet disposition by employing a process specific means and to return an augmented packet with an augmented disposition to the child node. Claim 39 is believed not anticipated by Edwards and thus allowable over the cited art.

In considering (a)-(f), Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaShonda T. Jacobs whose telephone number is 703-305-7494.


The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 703-308-7562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

LaShonda T. Jacobs  
Examiner  
Art Unit 2157

ltj  
January 9, 2003

  
ARIO ETIENNE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100